

IN THE SPECIFICATION

Please amend the paragraphs of the specification beginning at page 13, line 13 as follows:

FIG. 11 shows a catadioptric objective design including an immersion fluid wherein the catadioptric group includes two sets of lens mirror cavities; ~~and~~

FIG. 12 is an objective having seven elements corrected over a wavelength range from 320-1300nm using a single glass material, or in certain circumstances, more than one glass material to improve performance; and

FIG. 13 conceptually represents use of an objective in a flange in a microscope.

Please amend the paragraph of the specification beginning at page 18, line 11 as follows:

The maximum diameter of an objective element is 26 millimeters, which is significantly smaller than objectives previously employed in this wavelength range. The small size of this objective is particularly beneficial in view of the performance characteristics of the objective. The objective can be mounted in a standard microscope turret with an approximate 45mm flange-to-object separation. A conceptual drawing (not to scale) of an objective 1301, a flange 1302, and a microscope 1303 is illustrated in FIG. 13, where the flange in the aforementioned situation is approximately 45 mm from specimen 1304. The objective supports a numerical aperture of approximately 0.90, a field size of approximately 0.4mm, has a corrected bandwidth from approximately 285-313nm, and a

polychromatic wavefront error of less than approximately 0.067 waves.

Please amend the paragraph of the specification beginning at page 36, line 16, as follows:

From FIG. 10, the space between specimen 1001 and Mangin mirror element 1002 is filled by the immersion substance or immersion fluid. Hence the space between specimen 1001 and Mangin mirror element 1002 in this view is filled with the immersion substance or immersion fluid 1017, or the substance or fluid may be omitted if desired. Immersion fluid is therefore typically in direct contact with element 1002. Element 1002 may have a reflective coating on the right hand side with a small aperture in the center to allow light to pass through to the immersion fluid and to the specimen. In normal operation, a small amount of immersion substance, such as a drop of immersion fluid, is placed on the object to be imaged, such as specimen 1001. The system brings the objective into relatively close proximity with the specimen 1001. When the objective touches the immersion fluid, the immersion fluid expands to fill the gap between element 1002 and the specimen 1001.